

Exhibit 4

**ILLUSTRATION OF SAVINGS TO CELLULAR CUSTOMER MADE POSSIBLE
BY BULK DISCOUNTS ON LONG DISTANCE RECEIVED BY CELLULAR
OPERATORS NOT SUBJECT TO EQUAL ACCESS REQUIREMENT**

All Rates Shown are for a 10 Minute Call

1. Independent Cellular, Huntington/Ashland, WV MSA
Calling from Huntington, WV, to San Francisco, CA (2,747 miles)

Retail AT&T rate:	\$2.50 ¹
Independent Cellular's "bulk" AT&T rate:	\$1.40 ²
Customer Savings:	\$1.10

2. Associated Communications, Rochester, NY MSA
Calling from Rochester, NY to Los Angeles, CA (2,874 miles)

Retail AT&T rate:	\$2.50 ¹
Associated Communication's "bulk" AT&T rate:	\$2.20 ³
Customer Savings:	\$0.30

¹ Based on AT&T's retail long distance rate of \$0.25/minute for a call placed to a location between 1,911 and 3,000 miles away, at the day rate.

² Based on Independent Cellular's long distance rate of \$0.14/minute.

³ Based on Associated Communication's long distance rate of \$0.22/minute.

Sources: Telephone conversations with sales representatives of Independent Cellular, Huntington, WV, and Associated Communications (Cellular One), Rochester, NY, and AT&T's most recent filings with the FCC of Tariff No. 1, Long Distance Message Telecommunications Service, day rate.

customer savings in our example range from 12 percent to 40 percent of retail long distance rates.

Local Cellular Airtime

54. To provide additional evidence of the effect of the MFJ restrictions on competition we compared local cellular rates in areas in which the MFJ restrictions do or do not apply to at least one cellular carrier. Although local cellular rates are not directly affected by the MFJ restrictions, this comparison is likely to be relevant because the MFJ restrictions adversely affect the BOC mobile carriers' abilities to provide several cellular services besides interLATA toll long distance service. That is, the MFJ restrictions preclude competitive parity. Alternatively, according to the anticompetitive hypothesis at issue, where applicable the MFJ restrictions reduce the gains to collusion between the duopoly cellular carriers. Thus, if the duopoly power hypothesis were applicable we would expect even local cellular rates to be higher in areas where neither facilities-based carrier is subject to the MFJ restrictions.

55. To test this hypothesis we used cross-section regression analysis. We regressed local airtime rates¹⁸ for the top 120 MSAs on the following explanatory variables: A dichotomous

¹⁸Two versions of the dependent variable were used: (1) the lower of the two facilities-based carriers' prices for the lowest possible bill for 150 minutes of airtime based on 80 percent peak usage, and (2) the average of the two prices.

variable indicating the presence or absence of MFJ restrictions, and a population density variable to control for the need for more cells in areas of intense cellular use.¹⁹

56. The average airtime prices for the 33 MSAs without applicable MFJ restrictions ranged from \$65.95 to \$68.71, and the average airtime prices for the remaining 87 MSAs ranged from \$72.13 to \$75.70. The regression results indicate that the absence of MFJ restrictions is associated with lower, not higher, airtime prices.²⁰ Specifically, the regression model coefficient estimates indicate that for MSAs with equal population densities, a cellular customer's monthly bill will be roughly \$5.17 lower if there is competitive parity in his service area. For example, Houston, Texas and Salt Lake City, Utah are two MSAs with approximately equal population densities, with 621 and 663 persons per square mile, respectively. In Houston, neither of the mobile carriers is subject to the MFJ restrictions; in Salt Lake City, one of the mobile carriers is a BOC affiliate subject to the MFJ restrictions. In Houston, the average of the two carriers' lowest possible monthly charge is \$74.61; in Salt Lake City, the average price for comparable services is \$93.30.

¹⁹State regulation is another factor that could affect mobile airtime rates, whether or not the regulations specifically govern rates. However, prices of cellular services supplied by mobile carriers are not regulated in any significant way. See CTIA Service Annual Report, 1992 edition, op. cit.

²⁰Complete regression statistics are reported in Appendix A.

57. These statistical results support the view that the MFJ restrictions inhibit, rather than enhance competition.

Cluster Service Prices

58. Restricting our analysis to MSAs that form clusters of expanded service areas, we compared local airtime rates between MSAs where waivers have been granted to BOCs to provide integrated service across LATA boundaries and non-waiver MSAs. Our test was designed to see whether competition is lessened between facilities-based mobile carriers in areas where waivers have been granted to BOCs, which would be indicated by the presence of higher integrated service area airtime rates.

59. Again, using cross-section regression analysis, we tried to explain local airtime rates for MSAs that form clusters of expanded service with the following explanatory variables: A dichotomous variable indicating MSAs where waivers have or have not been granted to BOCs to provide integrated service beyond LATA boundaries, and the population density variable.²¹

60. The regression results indicate that, contrary to the market

²¹Our sample consists of 89 clustered MSAs. MSAs were selected depending on whether the same mobile carrier operated in adjacent MSAs and airtime bills in the adjacent MSAs were equal. Absent specific knowledge of cluster airtime rates we used the local airtime rate.

power hypothesis, higher rates are not associated with competitive parity between the duopoly mobile carriers. Instead, we found rates are actually lower where there is competitive parity, though the negative regression coefficient is not statistically significant. These results are consistent with other evidence in supporting our conclusion that removing the MFJ restrictions would be pro-competitive, not anticompetitive.²²

LOCAL EXCHANGE BOTTLENECK THEORY

61. The remaining hypotheses about the anticompetitive effects of removing the MFJ restrictions are all based on the notion that vertical integration of potentially competitive operations and a rate-regulated monopoly may lead to an output reduction in the competitive market and perhaps in the regulated market as well. This in fact was the theory that the DOJ Antitrust Division relied on in its case against AT&T which led to the divestiture of the BOCs.²³
62. Since the BOCs already provide cellular services unfettered by any significant price regulation, it is unlikely that the MFJ restrictions that govern the supply of mobile interexchange,

²²Complete regression statistics are reported in Appendix B.

²³See T. Brennan, "Why regulated firms should be kept out of unregulated markets: Understanding the divestiture in United States v. AT&T," The Antitrust Bulletin, Fall 1987; and R. Noll and B. Owen, "The Anticompetitive Uses of Regulation: United States v. AT&T," in The Antitrust Revolution, ed. J. Kwoka and L. White, Scott Foresman & Co., Boston, 1989, pp. 290-337.

which is an input into cellular telephone services, are relevant to the BOCs' ability and incentive to leverage local landline exchange market power into the market for cellular services. This is primarily because local exchange access is substantially more important to a facilities-based mobile carrier operation for completing local calls than for completing long distance calls. That is, the power of a BOC mobile-carrier parent that owns the local exchange bottleneck to confer a competitive advantage on its mobile affiliate by providing discriminatory local exchange access or through cross subsidization of its affiliated mobile operations would not be significantly enhanced by removing the MFJ restrictions. Notwithstanding our skepticism about the applicability of the anticompetitive hypotheses based on the regulated bottleneck theory, we evaluate below two of the most prominent ones -- based on discriminatory access and cost misallocation respectively.

Discriminatory Access

63. According to this hypothesis, the BOC mobile carrier parent favors one interexchange supplier (perhaps its own operations) over the supplier's rivals. The BOC mobile carrier obtains its interexchange services from the favored interexchange carrier and thus achieves a competitive advantage in the sale of mobile interexchange services to cellular customers. Allegedly, the BOC carrier has the incentive (and the ability) to act in this way because charges for access to its local

exchange bottleneck are constrained by regulation. Specifically, the BOC local exchange carrier is not free to set access charges, nor is it free to sell access at discriminatory rates.

64. The competitive impact in the market for mobile services of this alleged conduct cannot be evaluated on the basis of theory alone. Such "raising rivals' costs" scenarios may or may not result in an output restriction and may or may not be profitable.²⁴ For example, a vertically integrated input monopolist that is free to price discriminate will not charge its downstream operation a lower price than it charges its downstream operation's rivals unless the noncaptive downstream firms use the input more intensively than does the monopolist's own downstream operations or unless downstream market competition is limited. And, in the latter case in which a market power premium is collected at two separate stages, the most likely effect of price discrimination would be an increase in output and economic welfare.

65. In the absence of theoretical certainty, it is important and necessary to evaluate the applicability of this anticompetitive hypothesis based on available empirical evidence. In the case at hand, there are two important

²⁴See S. Salop and D. Scheffman, "Raising Rivals' Costs," American Economic Review, Vol. 73, No. 2, May 1983, and T. Brennan, "Understanding Raising Rivals' Costs," DOJ EAG Discussion Paper, 1986.

factual issues. First, could a BOC local exchange carrier (LEC) disadvantage the rival of its local mobile affiliate by supplying unfavorable local exchange access to the IXC used by the BOC mobile-affiliate rival? Second, if the BOC could raise its mobile affiliate's rival's cost by supplying discriminatory access to IXCs, would the BOC have incentives to do so?

66. It is highly unlikely that a BOC LEC would engage in discrimination in order to promote the fortunes of its mobile affiliate. First, the feasibility of differentially raising its mobile affiliate's rival's cost is highly unlikely. If the BOC favored an independent IXC, the latter would also supply interexchange to the BOC mobile rival, thereby undermining the BOCs' alleged attempt to gain an advantage in the cellular market. If, instead, the BOC granted differentially favorable access to a captive supplier of interexchange services whose services were unavailable to the BOC mobile rival, the mobile rival could bypass the local exchange as a means of accessing the long distance network.

67. Virtually all cellular carriers originate a sufficient volume of long-distance traffic to justify purchasing dedicated access to a single IXC or renting special access facilities, which can be obtained from competing access providers (CAPs). Thus, cellular carriers are not dependent on BOCs, as LECs,

for access to interexchange suppliers.²⁵

68. Second, even if the alleged discrimination were feasible, its profitability is highly unlikely. The BOC LEC would have to raise the cost of local exchange access by IXCs substantially in order to achieve a significant competitive advantage in the cellular market. Specifically, in order to achieve a relative cost advantage in the cellular services market of 1 percent, the BOC LEC would have to raise cost of access by roughly 20 percent. This is because LEC access revenues account for only approximately 50 percent of total long distance revenues and because cellular long distance revenues account for only approximately 10 percent of total cellular expenses.²⁶ That is, if the cost of access rose by 20 percent, the cost of long distance service would rise by roughly 10 percent. And, if the cost of long distance rose by 10 percent, the cost of cellular services overall would rise by approximately 1 percent.

²⁵See Affidavit of Dr. Charles L. Jackson in which he estimates that among cellular service areas the average long-distance minutes per "pop" per month is 0.31, and in which he estimates that "special access" is competitive with "switched access" for volumes in excess of 20,000 MOU per month. Thus, for cellular service areas with populations in excess of 65,000, it is unlikely that an LEC could raise the cost to local cellular carriers of accessing the interexchange market.

²⁶See The Geodesic Network: 1987 Report on Competition in the Telephone Industry, U.S. Department of Justice, Antitrust Division, January 1987, prepared by Peter Huber, p. 3.8, which estimates that 50-60 percent of an IXC's total costs of providing long distance service is paid to local exchange carriers for switch access, and See Cellular Communications Industry Report, 1990, op.cit.

69. Even if the elasticity of demand for long distance service were only 0.5 (in absolute value terms), a 10 percent increase in the price of long distance service would reduce long distance traffic by 5 percent and hence BOC access revenues by \$0.99 billion (\$19.785 billion times 5 percent).^{27,28} In contrast, all cellular revenues including long distance charges were approximately 8.6 billion at the end of 1991.²⁹

²⁷The higher the demand elasticity, the more the BOCs would lose access revenues by raising the cost of access. An elasticity estimate of 0.5 is probably too low. In "B.C./Alberta Long Distance Calling," A. de Fontenay and J.T. Marshall Lee in Economic Analysis of Telecommunications, ed. by L. Cownville, A. de Fontenay, and R. Dobell, Elsevier Science Publishers B.V. (North-Holland), 1983, the authors found that the price elasticity of demand for long distance service increases systematically with distance and estimated a price elasticity of demand of 1.85 for long distance minutes. We confirmed this estimate by analyzing the growth of interstate switched access minutes, the price of interstate toll calls, and the growth in real disposable personal income. We estimated an elasticity of demand for long distance services to be between 1.6 and 1.9. Specifically, these estimates are based on 1) 100 percent increase in interstate switched access minutes from the fourth quarter of 1984 to the fourth quarter of 1990, 2) 45 percent decrease in the real price of interstate toll calls from 1984 to 1990, and 3) 15 percent increase in real disposable personal income from 1984 to 1990. Income elasticity of demand is assumed to range between 1.0 and 2.0. Thus, 15 to 30 percent of the increase in long distance usage is attributed to the increase in real disposable income. The remainder of the change in usage, 70 to 85 percent, is attributed to the change in price, resulting in the estimated price elasticity of 1.6 to 1.9. (Data Sources: Trends in Telephone Service, Industry Analysis Division, Common Carrier Bureau, FCC, February 1992, Department of BLS, and Economic Report of the President, February 1992.)

²⁸Our estimate of BOC access revenues is for December 1991. See 1992 NATA Telecom Market Review and Forecast, National American Telecommunications Association.

²⁹This figure is based on the Donaldson, Lufkin and Jenrette study which suggests that toll long distance charges are approximately 10 percent of the typical cellular customer's monthly bill and the latest CTIA Data Survey (March 1992) that estimates total cellular charges excluding toll long distance as \$7.7 billion.

It is highly unlikely that an overall competitive advantage of 1 percent based on cheaper mobile long distance service would enable BOC cellular carriers to gain 12 share points in the cellular market to compensate for the loss of almost \$1 billion in access revenues.

70. Thus, we conclude that there is no substantial possibility that BOCs would find it profitable to raise their mobile affiliates' rivals' costs or to reduce their mobile affiliates' rivals' demand through the indirect means of providing relatively unfavorable local exchange access to the IXCs that supply interexchange services to the BOC mobile carriers' rivals.

Cost Misallocation

71. The second major anticompetitive hypothesis based on joint ownership by the BOCs of regulated local landline exchange monopolies and of the interexchange facilities used to supply mobile interexchange services focuses on the potential for cost misallocation that allegedly would result from lifting the MFJ restrictions. Apparently the concern here is that the BOC would use its ability to shift the costs incurred by its mobile affiliate to its LEC operations to enable the BOC mobile carrier to out-compete its rival even though its mobile interexchange operations may be less efficient.
72. We conclude that there is no substantial possibility that removing the MFJ restrictions pertaining to cellular service would result in cross-subsidization through cost misallocation.
73. First, it is inconceivable that removing only the equal access requirements would have any effect on the ability or incentives for BOCs to misallocate costs. The cost of mobile interexchange services purchased from independent carriers in the absence of equal access could not be imputed to local exchange operations unless there were a complete reversal of the rules governing the establishment of separate corporate entities by BOCs to furnish cellular services.³¹

³¹These rules are set forth in 42 CFR 22.9

74. Second, even in the case when the BOC mobile affiliate provides interexchange services internally it is unreasonable to suppose that removing the MFJ restrictions would have a significant impact on the ability or incentive for the BOCs to cross-subsidize mobile interexchange. This is because mobile long distance service is a small part of overall cellular services and because the BOCs are currently permitted to provide cellular services notwithstanding their ownership of the local exchange bottlenecks. In short, if cross-subsidization were profitable the BOCs would be fully engaged in such practices today and would not gain significantly from entering additional lines of unregulated business.

75. Finally, cross-subsidization through cost misallocation is of primary concern when cost-of-service or rate-of-return regulation is applicable. In contrast, with price-cap regulation, the corporate parent of the regulated and unregulated entities would have little incentive to shift costs from the unregulated to the regulated entity since regulated prices are not derived from costs.³² This view is

³²See L. Cabral and M. Riordan, "Incentives for Cost Reduction Under Price Cap Regulation," Journal of Regulatory Economics, (1989), pp. 93-102. However, price-cap regulation may increase incentives for access discrimination relative to rate-of-return regulation. See T. Brennan, "Cross-Subsidization and Discrimination by Regulated Monopolists," DOJ EAG Discussion Paper, 1987. As indicated in paragraphs 63-70, we think access discrimination is unlikely with or without rate-of-return regulation.

supported by the empirical study of Mathios and Rogers which compares intra-state long distance rates between states with and without rate-of-return regulation.³³

76. At present, a majority of states have replaced or are replacing rate-of-return regulation with incentive regulation.³⁴ Thus, most LECs do not or soon will not have any significant incentive to cross-subsidize unregulated lines of business, including mobile interexchange operations.

³³See A. Mathios and R. Rogers, "The Impact of Alternative Forms of State Regulation of AT&T on Direct-Dial, Long-Distance Telephone Rates," RAND Journal of Economics, 20 (1989), pp. 437-453.

³⁴See Appendix, p. 5, of Reply Affidavit of Stanford L. Levin in U.S. v. Western Electric Co., Inc., and American Telephone and Telegraph Company, U.S. District Court of the District of Columbia, Civil Action No. 82-0192 (HHG).

CONCLUSION

77. On the basis of the foregoing analysis, we conclude that removing the MFJ restrictions at issue in this proceeding would likely increase the competitiveness of the market for mobile and other wireless services and improve the quality of these services available to consumers.
78. First, a comparison of retail and wholesale long distance prices and a review of non-BOC marketing policies suggests that an elimination of the interexchange and equal access restrictions would lead to a substantial lowering of long distance charges and substantial savings for consumers -- on the order of \$200 million to \$400 million per year.
79. Second, elimination of the restrictions at issue would lead to improvements in the quality of service available to the public -- in particular, intersystem handoff, automatic call delivery, clustering, and other services such as voice mail.
80. Finally, competitive parity would be expected to generate a more rapid introduction of new services and more aggressive pricing in this important area.
81. On the other hand, we find no substantial possibility that removing the MFJ restrictions at issue here would pose competitive problems. The various anticompetitive hypotheses that have been advanced are unconvincing both theoretically

and on the basis of available evidence.

82. Thus, in view of highly likely benefits to competition and highly unlikely costs, it would appear that the interests of consumers would lie in granting the requested modifications in the MFJ.


Richard S. Higgins


James C. Miller III

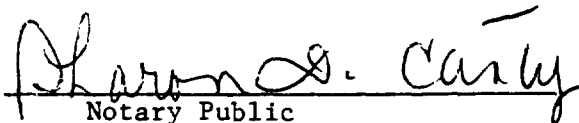
As to James C. Miller III
Subscribed and Sworn before me
this 31st. day of July, 1992.


Notary Public

My Commission Expires: My Commission Expires January 14, 1996

As to Richard S. Higgins

Subscribed and sworn to before me this
31st day of July, 1992


Notary Public

My Commission Expires May 31, 1993

VARIABLE KEY FOR REGRESSION ANALYSIS
OF CELLULAR RATES IN THE TOP 120 MSAs

Prices Are Based On Each Company's Lowest Possible
Bill For 150 Minutes of Airtime ¹

LOWPRIC	The lower of the two prices in each MSA.
AVGPRIC	The simple average of the two prices in each MSA.
BOC0	Dummy variable: 1 if MSA with no equal access (no facilities—based BOC affiliate)(33); 0 otherwise.
DENSITY	MSA population per square mile (per Bureau of the Census).

¹ Based on 80 percent peak and 20 percent off—peak; source: "Cellular Rates, 1992," Paul Kagan Associates.

LS // Dependent Variable is AVGPRI
Date: 6-13-1992 / Time: 16:09
SMPL range: 1 - 120
Number of observations: 120

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	71.582249	1.6817706	42.563623	0.0000
BOCO	-5.1718002	2.6340905	-1.9634102	0.0520
DENSITY	0.0060186	0.0015058	3.9968877	0.0001
R-squared	0.173085	Mean of dependent var		73.71433
Adjusted R-squared	0.158950	S.D. of dependent var		13.57035
S.E. of regression	12.44520	Sum of squared resid		18121.32
Log likelihood	-471.3138	F-statistic		12.24490
Durbin-Watson stat	2.074215	Prob(F-statistic)		0.000015

LS // Dependent Variable is LOWPRIC
Date: 6-13-1992 / Time: 16:08
SMPL range: 1 - 120
Number of observations: 120

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	68.000748	1.7207331	39.518475	0.0000
BOCO	-4.2305356	2.6951160	-1.5697045	0.1192
DENSITY	0.0058913	0.0015407	3.8237771	0.0002
R-squared	0.150620	Mean of dependent var		70.30958
Adjusted R-squared	0.136101	S.D. of dependent var		13.69990
S.E. of regression	12.73353	Sum of squared resid		18970.70
Log likelihood	-474.0622	F-statistic		10.37377
Durbin-Watson stat	1.982257	Prob(F-statistic)		0.000071

VARIABLE KEY FOR REGRESSION ANALYSIS OF CELLULAR RATES IN CLUSTER MSAs

Prices Are Based On Each Company's Lowest Possible
Bill For 150 Minutes of Airtime ¹

AVGPRIC	Simple average of the two prices in each cluster MSA.
WAIVER	Dummy variable: 1 if MSA where court waiver has been granted for BOC affiliate to provide integrated service beyond LATA boundaries (44); 0 otherwise.
DENSITY	MSA population per square mile (per Bureau of the Census).

¹ Based on 80 percent peak and 20 percent off-peak; source: "Cellular Rates, 1992," Paul Kagan Associates.

LS // Dependent Variable is AVGPRICE
Date: 6-13-1992 / Time: 16:05
SMPL range: 1 - 89
Number of observations: 89

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	71.518105	2.0692840	34.561763	0.0000
WAIVER	-0.6541648	2.7372499	-0.2389861	0.8117
DENSITY	0.0062449	0.0015822	3.9468986	0.0002
R-squared	0.154784	Mean of dependent var	75.31848	
Adjusted R-squared	0.135127	S.D. of dependent var	13.69496	
S.E. of regression	12.73612	Sum of squared resid	13949.94	
Log likelihood	-351.2150	F-statistic	7.874542	
Durbin-Watson stat	2.094775	Prob(F-statistic)	0.000724	

August 3, 1992

**RM-8012
IN THE MATTER OF POLICIES AND RULES
PERTAINING TO THE EQUAL ACCESS OBLIGATIONS
OF CELLULAR LICENSEES**

**COMMENTS OF AMERITECH, BELLSOUTH CORPORATION, NYNEX
CORPORATION, PACIFIC TELESIS GROUP, AND U S WEST, INC.
ON MCI'S PETITION FOR RULEMAKING**


CERTIFICATE OF SERVICE

I hereby certify that all parties required to be served have been served copies of the foregoing Comments of Ameritech, BellSouth Corporation, NYNEX Corporation, Pacific Telesis Group, and U S West, Inc. on MCI's Petition for Rulemaking by first-class mail, postage prepaid, this 3rd day of August 1992, upon each person designated below:

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August 3, 1992

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COMMENTS OF AMERITECH, BELLSOUTH CORPORATION, NYNEX
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